# CANON DE SANTA ELENA PROTECTED AREA Annotated Bibliography

Michael Welsh
Principal Investigator
Sciences and Resource Management Division
Big Bend National Park
May 12, 2000

Canon de Santa Elena Protected Area Annotated Bibliography Michael Welsh, Principal Investigator Big Bend National Park May 12, 2000

### **Executive Summary**

On November 7, 1994, the federal government of the Republic of Mexico declared some 207,000 hectares of land south of the Rio Bravo and the Big Bend National Park as the Canon de Santa Elena Protected Area. This brought a region of approximately 200 kilometers in length, and 30 kilometers in width, under the management of the Mexican federal agency known as SEMARNAP (Secretaria de Medio Ambiente, Recursos Naturales y Pesca), with regional headquarters in La Ciudad Chihuahua. Then in September 1998, Vidal Davila, Chief, Sciences and Resource Management Division at Big Bend, requested preparation of a bibliography of scientific and natural resource studies of the Canon de Santa Elena area. Michael Welsh, principal investigator (and author of the Administrative History of Big Bend National Park), commenced a program of scholarly research to identify these sources.

Two issues became apparent in the collection of materials on the Canon de Santa Elena project. First, few studies had been undertaken of this area by Mexican government agencies or scholars (this is in contrast to the better-studied Maderas del Carmen Protected Area in the State of Coahuila). In addition, consultation with libraries on-line revealed few sites with collections substantial enough to merit a visit by the principal investigator for the purposes of the draft preparation. The principal investigator traveled to Chihuahua to meet with regional officials of SEMARNAP, with scholars of natural resource policy at the universities in Chihuahua, and with librarians and archivists at the Chihuahua campus of *El Instituto Technologico y Des Estudios Superiores de Monterrey (ITESM)*, and *El Centro de Informacion Del Estado de Chihuahua (CIDECH)*. Much valuable information was gathered there that constitutes the core of this bibliography.

The principal investigator also conducted research in person at the DeGolyer Library at Southern Methodist University (one of the most complete private collections on Mexican natural resources in the Southwest). On-line research was conducted in the libraries of the University of Texas at Austin, the University of Texas at El Paso, the Universidad Autonoma de Ciudad Juarez, and the unified catalogues of the University of New Mexico, the University of Colorado at Boulder, Colorado State University, the University of Wyoming, the University of Northern Colorado, and the Denver Public Library.

### Introduction to the Subject Matter

The materials identified by the principal investigator reflect the modest focus of scholars and public agencies in Mexico and the United States on the Canon de Santa Elena area. There is no overview of the natural and cultural history of the area; in fact, the textbooks and general-interest sources cited in the bibliography rarely provide in-depth coverage of the state of Chihuahua east of Ciudad Juarez. Thus the principal investigator reviewed any and all sources that made mention of the large expanse that now constitutes the Canon de Santa Elena protected area. These included several distinctive studies by the Universidad Nacional Autonoma de Mexico (UNAM), conducted in the 1940s, in and around Manuel Benavides. These studies assessed the poor condition of health care in the area, informed by the statistical analyses of the bibliography (census and agricultural studies). This suggests that World War II was the first time that the federal government in Mexico City devoted resources and time to gathering information about life in the future protected area.

#### Research Area

The Canon de Santa Elena protected area is part of the Chihuahuan Desert biome, with a great diversity of natural and cultural resources. The region served as a zone of frontier defense for the Spanish province of Chihuahua in the eighteenth and early nineteenth centuries, with the ruins of the ancient presidio of San Carlos still visible near the community of Manuel Benavides (renamed from San Carlos in 1928 for a former mayor killed in the Mexican Revolution of 1910-1917). The environment includes the Sierra Rica (a center of mining in the nineteenth and twentieth centuries), and the small river communities of Santa Elena and Nuevo Lajitas (across the river from the Texas town of Lajitas). The highest point in the area is the Sierra Rica, at 750 meters (2,347 feet).

## History of the Canon de Santa Elena Protected Area and Big Bend National Park

The idea of a bi-national natural preserve along the Rio Grande began in the early 1930s, when private individuals and local officials in Texas sought means to improve an economy devastated by the dual traumas of drought (the famed "Dust Bowl") and the Great Depression. When the presidential administration of Franklin D. Roosevelt promoted its "Good Neighbor Policy" to improve relations with Mexico and other nations of Latin America, the idea of a joint venture gained momentum, along with the effort to establish Big Bend National Park on the Texas side of the river. This idea met with substantial early enthusiasm, given the intentions of Mexican President Lazaro Cardenas (1934-1940) to strengthen his country's commitment to natural resource protection. Several studies were made of the area south of the Rio Grande, but the focus of these surveys was on the

Coahuila portion of the international park (the Sierra del Carmen south of the village of Boquillas). There were no roads running west from Santa Elena at that time, and San Carlos was served only by a dirt road to Ojinaga. There also were no large private ranches in the Canon de Santa Elena area; hence there were no hunting preserves that might attract international tourists.

For these reasons of aridity, isolation, lack of transportation, and the distance from the state capital in Ciudad Chihuahua, Mexican officials rarely ventured into the Canon de Santa Elena area. In addition, employees of the National Park Service and the Department of the Interior continued to work with Mexican officials in the state of Coahuila throughout the years 1940-1980 to strengthen connections between the two countries. Not until the movement in the late 1980s and early 1990s to set aside the large protected areas did the state of Chihuahua decide to join the planning process. From this would come the 1994 declaration of the Canon de Santa Elena protected area.

### Methods Used to Compile the Annotated Bibliography

The principal investigator traveled in June 1999 to Ciudad Chihuahua, to meet with officials of SEMARNAP, and to collect materials in the libraries of ITESM-Campus Chihuahua, and CIDECH. He also traveled in November 1999 to Dallas, Texas, to conduct research in the DeGolyer Library at Southern Methodist University; one of the premier collections of Mexican natural and cultural history materials in the Southwest. On-line searches of libraries at the University of Texas at Austin, the University of Texas at El Paso, the University of New Mexico, La Universidad Autonoma de Ciudad Juarez and the "Prospector" network of libraries in Colorado and Wyoming, revealed that few works on the Canon de Santa Elena protected area could be found. The principal investigator then decided to prepare the annotated bibliography with the sources from these libraries without visiting their collections to elaborate upon the sources beyond the descriptions provided on-line.

### Sources of Information and Their Locations

Because of advances in on-line research, the sources identified in this bibliography can be entered into standard library search engines for review. The libraries at the University of Texas at Austin, the University of Texas at El Paso, the DeGolyer Library at Southern Methodist University, the ITESM-Campus Chihuahua, and CIDECH are the most valuable for any researcher interested in sources on the Canon de Santa Elena protected area.

### **Annotated Bibliography**

### Canon de Santa Elena Protected Area

(Titles contain lower-case and upper-case spellings as per citations from Internet library search sources.)

Author: Aboites, Luis

Date: 1986

Title: Agua y tierra en la region del Conchos-San Pedro,

Chihuahua, 1720-1938: fuentes para una historia

Agraria.

Publication: Mexico, D.F.: SEP, Centro de Investigaciones y

Estudios Superiores en Antropologia Social.

Vol: Pages: 187pp.

Summary: Study of water rights, irrigation, and land tenure in

the Rio Conchos and Rio San Pedro valleys west of Canon de Santa Elena. Copy available at Norlin Library,

University of Colorado, Boulder.

Key Words: Water rights, Irrigation, Land Tenure, Rio Conchos,

Rio San Pedro.

Author: Almada, Francisco R.

Title: Geografia del Estado de Chihuahua.

Date: 1945

Publication: Chihuahua, Mexico: Ruiz Sandoval.

Vol: Pages: 627pp.

Summary: Early study of the landscape of Chihuahua state. Copy

available at DeGolyer Library, Southern Methodist

University, Dallas, Texas.

Key Words: Geography, Chihuahua.

Author: Almada, Francisco R.

Title: Diccionario de historia, geografia y biografia

chihuahuenses.

Publication: Chihuahua, Mexico: Ediciones Universidad de

Chihuahua, 1968, Second Edition.

Vol: Pages: 578pp.

Summary: General survey of social, economic, and scientific

features of Chihuahua state. Copies available at

DeGolyer Library, SMU; also at Benson Latin American Collection, University of Texas Library, Austin, Texas.

Key Words: Geography, History, Biography, Chihuahua.

Author: Almada, Francisco R.

Title: El Ferrocarril de Chihuahua al Pacifico.

Date: 1971

Publication: Mexico: Editorial Libros de Mexico.

Vol: Pages: 178pp.

Summary: Brief study of railroad-building in Chihuahua (no

roads in Canon de Santa Elena area). Copy available in

DeGolyer Library, SMU.

Key Words: Railroads, Chihuahua.

Author: Alvarez, Jaime

Title: Habitaron Chihuahua grandes dinosaurios.

Date: 1997

Publication: Diario de Chihuahua

Vol: Pages: May 6, 1997

Summary: News story of dinosaur research in Chihuahua

from the border with Texas to the Pacific Ocean. Copy

available on the Internet at

http://200.34.156.10/universidad.Wreturn.pl

Keywords: Dinosaurs, Chihuahua.

Author: Anderson, Sydney.

Title: Mammals of Chihuahua: Taxonomy and

Distribution.

Date: 1972

Publication: New York: American Museum of Natural History. Vol: Pages: Volume 148, Article 2, Bulletin of the American

Museum of Natural History: 151-410.

Summary: Study of fauna of Chihuahua state. Copies available at

the University of Denver Library; also at the Science

Library, University of Colorado, Boulder.

Key Words: Mammals, Chihuahua.

Author: Bell, James John.

Title: Geology of the foothills of Sierra de Los Pinos,

Northern Chihuahua, near Indian Hot Springs,

Hudspeth County.

Date: 1963

Publication: M.A. Thesis, University of Texas.

Vol: Pages: 83pp.

Summary: Study of geology of mountain range to the west of

Canon de Santa Elena area. Copy available at the

University of Texas Library, Austin.

Key Words: Sierra de Los Pinos, Chihuahua, Indian Hot Springs.

Author: Bissonnette, John A., and John W. Ault.

Title: Big Bend National Park Biosphere Reserve: A History of

Scientific Study.

Date: 1985

Publication: Orono, ME: Maine Cooperative Wildlife Research

Unit, University of Maine.

Vol: Pages: 2 vols.

Summary: Technical survey of the international biosphere

reserve surrounding Big Bend National Park and

the Canon de Santa Elena area. Copy available at the Science Library, SMU; also at the Science and Research

Management Library, Big Bend National Park.

Key Words: Biosphere, Big Bend National Park.

Author: Bridges, Luther W., and Zoltan de Cserna.

Title: Estudios geologicos en el Estado de Chihuahua.

Date: 1966

Publication: Boletin (Universidad Nacional Autonoma de Mexico,

Instituto de Geologia).

Vol: Pages: Number 74; 148pp.

Summary: Study of geologic features of Chihuahua state. Copy

available at DeGolyer Science Library, SMU.

Key Words: Geology, Chihuahua.

Author: Cardenas Vargas, Jose.

Title: Monografia geologico-minera del estado de Chihuahua.

Date: 1992

Publication: Pachuca, Hidalgo, Mexico: Secretaria de Energia,

Minas e Industria Paraestatal, Subsecretaria de

Minas e Industria Basica.

Vol: Pages: 1<sup>st</sup> edition; v.

Summary: Study of geologic and economic features of mining

and minerals in Chihuahua. Copy available at the Institute for the Study of Earth and Man, Heroy Hall,

SMU.

Key Words: Mines, Minerals, Geology, Chihuahua.

Author: Case, Jim, and Beto Garcia.

Title: "Health Services Accessibility in a Rural Environment: A

Study of the Transnational Area of Southern Brewster County and Presidio Counties and Northern Mexico."

Date: January 1993.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 5.

Summary: Study of heath care delivery in Big Bend region of the

United States, and Chihuahua and Coahuila States,

Mexico.

Key Words: Brewster County, Presidio County, rural health care,

Mexico.

Author: Centro de Informacion y Estudios Economicos-CIEE Title: Perfil Historico y Cultural: Gobierno del Estado de

Chihuahua.

Date: 1999 Publication: Web Site:

http://www.chihuahua.gob.mx/Mongrafias.Mpios/Benavid

es/MAB.htm

Vol: Pages: Web page

Summary: Description of the geography, history, and

government of the community of Manuel

Benavides, Chihuahua.

Key Words: Manuel Benavides, Chihuahua.

Author: Chacon, Roberto.

Title: Geology of the San Carlos Dome, Manuel

Benavides, Chihuahua, Mexico

Date: 1972.

Publication: Master's Thesis, University of Texas at El Paso.

Vol: Pages: Number 834; 73pp.

Summary: Study of stratigraphy of the area around the

community of Manuel Benavides, and the history of mining in the area. Copy available at University of

Texas at El Paso Library.

Key Words: Geology, Stratigraphy, Manuel Benavides,

Chihuahua.

Author: Chihuahua (Mexico: State), Departamento de

Ecologia.

Title: Propuesta proyecto Reserva de la Biosfera Santa

Elena-Sierra del Carmen.

Date: Julio 1993

Publication: Chihuahua, Chihuahua: Direccion General de

Desarrollo Urbano y Ecologia.

Vol: Pages: 1 vol.

Summary: Study of plans to define the boundaries of the

biosphere reserve of Canon de Santa Elena and the

Sierra del Carmen (Coahuila). Copy available at

University of Texas at El Paso Library.

Key Words: Biosfera de Santa Elena, Chihuahua.

Author: Chihuahua (Mexico: State), Departamento de

Ecologia.

Title: *Ecoboletin.* 

Date: October-December 1992-.

Publication: Chihuahua, Chihuahua: Departamento de Ecologia

de la Direccion General de Desarrollo Urbano y Ecologia, Gobierno del Estado de Chihuahua.

Vol: Pages: 1992-.

Summary: General-interest publication about environmental

issues in Chihuahua state.

Key Words: *Ecoboletin,* Chihuahua.

Author: Chuchla, Richard Julian.

Title: Reconnaissance geology of the Sierra Rica area,

Chihuahua, Mexico.

Date: 1981

Publication: Master's Thesis, University of Texas at Austin.

Vol: Pages: 199pp.

Summary: Study of geology and volcanism of area

surrounding the community of Manuel Benavides,

Chihuahua. Copy available at University of Texas Library,

Austin.

Key Words: Geology, Volcanism, Sierra Rica, Chihuahua.

Author: Clark, Kenneth F., P.K.M. Megaw, and Joaquin

Ruiz, eds.

Title: Lead-zinc-silver carbonate-hosted deposits of

northern Mexico.

Date: 1986.

Publication: Society of Economic Geologists.

Vol: Pages: "Guidebook for field and mine excursions, Society

of Economic Geologists," 329pp.

Summary: Study of lead, zinc, and silver deposits in

Chihuahua state. Copy available at the Geology Library,

University of Texas, Austin.

Key Words: Lead, Zinc, Silver, Mining, Chihuahua.

Author: Collins, Edward W., and Jay Alan Raney.

Title: Quarternary faults within Intermontane basins of

northwest Trans-Pecos Texas and Chihuahua.

Date: 1997

Publication: Austin, Texas: Bureau of Economic Geology,

University of Texas at Austin.

Vol: Pages: Report of investigations (University of Texas at

Austin, Bureau of Economic Geology): no. 245;

59pp.

Summary: Comparative study of fault lines and stratigraphy

of intermontane basins shared by Texas, New

Mexico, and Chihuahua state. Copy available at the

Science Library, SMU.

Key Words: Faults, Stratigraphy, Intermontane Basins,

Chihuahua.

Author: Creel, Enrique C.

Title: El Estado de Chihuahua: Su historia, geografia y

riquezas naturales.

Date: 1928

Publication: Mexico, D.F.: El Progreso.

Vol: Pages: n/a

Summary: Brief early study of the history and geography of

Chihuahua state by a large landowner near San

Carlos. Copy available at the Universidad Autonoma de

Chihuahua Library, Ciudad Chihuahua, Chihuahua,

Mexico.

Key Words: Chihuahua, History, Geography.

Author: Delgado Hernandez, Alberto.

Title: "Hallan en M. Benavides fosiles de dinosaurios."

Date: 1997.

Publication: Diario de Chihuahua.

Vol: Pages: April 6, 1997.

Summary: Newspaper story of zoological research in the

Canon de Santa Elena area by faculty from the Universidad Autonoma de Chihuahua. The study examined ancient and contemporary fauna of the

area. Copy available on the Internet at

http://200.34.156.10/universidad.Wreturn.pl

Key Words: Dinosaurs, Canon de Santa Elena, Chihuahua.

Author: Dobie, Dudley R.

Title: Adventures in the canyon, mountain, and desert

country of the Big Bend of Texas and Mexico.

Date: 1952

Publication: San Marcos, Texas: private printing.

Vol: Pages: 29.

Summary: Brief survey of natural features of the Rio Grande

through Big Bend National Park, with pictures by Dobie and Henry B. DuPont II. Copy available at the

DeGolyer Library, SMU.

Key Words: Big Bend, Mexico.

Author: Dominguez Vega, Arnulfo.

Title: Informe sanitario de la poblacion de Manuel

Benavides, (antes San Carlos) Chihuahua.

Date: 1945.

Publication: Master's Thesis, Universidad Nacional Autonoma

de Mexico.

Summary: Medical research on conditions of sanitation in the

community of Manuel Benavides at the end of

World War II. Copy available at the Benson Collection LAC-Z Rare Books, University of Texas Library, Austin.

Key Words: Sanitation, Manuel Benavides, Chihuahua.

Author: Ferrusquia-Villafranca, Ismael, and Albert Elmer

Wood.

Title: New fossil rodents from the early Oligocene

Rancho Gaytan local fauna, northeastern

Chihuahua, Mexico.

Date: 1969.

Publication: Austin, Texas Memorial Museum.

Vol: Pages: Pearce-Sellards series, no. 16; 13pp.

Summary: Study of the paleontology of northeastern

Chihuahua, including rodents. Copies available at the Science Library, SMU; also at the Geology Library,

University of Texas, Austin.

Key Words: Rodents, Oligocene, Rancho Gaytan, Chihuahua.

Author: Flores, Emma Guadalupe, Pablo Chavez Velazco,

and Maria del Refugio Mora Duran.

Title: Chihuahua: Geografia e historia.

Date: 1995.

Publication: Mexico: Escolares.

Vol: Pages: n/a.

Summary: General survey of the history and geography of

Chihuahua state. Copy available at the Universidad Autonoma de Ciudad Juarez Library, Ciudad Juarez,

Chihuahua, Mexico.

Key Words: Geography, History, Chihuahua.

Author: Galicia, Daniel F.

Title: Manual de prevencion y extincion de incendios

forestales para uso de las escuelas del estado de

Chihuahua.

Date: 1951.

Publication: Preparado por el ing. Daniel F. Galicia.

Cooperacion: Chihuahua-Durango, Asociacion Nacional de Productores de Maderas del Pino.

Vol: Pages: 19pp.

Summary: Safety manual on the history of forest fires in

Chihuahua, and measures to prevent fires. Manual prepared for Mexico's chief forester. Copy available at the Benson Latin American Collection, University of

Texas Library, Austin.

Key Words: Forest, Fires, Chihuahua.

Author: Gobierno del Estado de Chihuahua.

Title: Chihuahua: Imagen y destino, 1709-1984 (275

aniversario).

Date: 1984.

Publication: Chihuahua, Chihuahua: Gobierno del Estado de

Chihuahua.

Vol: Pages: n/a.

Summary: Brief overview study of the history of Chihuahua

state. Copy available at the Universidad Autonoma de Chihuahua Library, Ciudad Chihuahua, Chihuahua,

Mexico.

Key Words: History, Chihuahua.

Author: Gonzalez Reyna, Jenaro.

Title: La industria minera en el estado de Chihuahua..

Date: 1946.

Publication: Mexico: [s.n].

Vol: Pages: Comite Directivo para la Investigación de los

Recursos Minerales de Mexico. Boletin; no. 7;

152pp.

Summary: Study of mines and mining in Chihuahua state. Copy

available at the Science Library, SMU.

Key Words: Mining, Chihuahua.

Author: Gonzalez Reyna, Genaro.

Title: Memoria geologico-minera del Estado de

Chihuahua: minerales metalicos.

Date: 1956.

Publication: Mexico: International Geological Congress (20th:

1956: Mexico).

Vol: Pages: 280pp.

Summary: Study of metal mining in Chihuahua state. Copy available

at the Benson Latin American Collection, University of

Texas Library, Austin.

Key Words: Minerales Metalicos, Chihuahua.

Author: Goodell, Philip C., Carlos Garcia Gutierrez, and

Ignacio Reyes Cortes.

Title: Energy Resources of the Chihuahua Desert Region.

Date: 1992.

Publication: Department of Geological Sciences, UT El Paso: El

Paso Geological Society: Center for InterAmerican

and Border Studies, UT El Paso: Research Consortium of the Chihuahua Desert: Energy

Center, UT El Paso.

Vol: Pages: 310pp.

Summary: Survey (in Spanish and English) of power

resources, the economic geology, and stratigraphic

geology of the Chihuahuan desert region of

Mexico. Copy available at the DeGolyer Science

Collection, SMU.

Key Words: Power Resources, Geology, Stratigraphy,

Chihuahua.

Author: Gregory, James L.

Title: Volcanic stratigraphy and K-Ar of the Manuel

Benavides area, northeastern Chihuahua, Mexico, and correlations with the Trans-Pecos volcanic

province...

Date: 1981.

Publication: Master's Thesis, University of Texas at Austin.

Vol: Pages: 78pp.

Summary: Study of geologic formations in and around the

community of Manuel Benavides, Chihuahua, and comparison to the greater Trans-Pecos region. Copy available at the Geology Library, University of Texas,

Austin.

Key Words: Volcanoes, Stratigraphy, Manuel Benavides,

Chihuahua, Trans-Pecos.

Author: Griggs, Jorge.

Title: Mines of Chihuahua, 1907: history, geology,

statistics, mining companies directory.

Date: 1907.
Publication: Chihuahua.
Vol: Pages: 349pp.

Summary: Description (with maps) of early twentieth century

mining resources of Chihuahua state. Copy available at

the Science Library, DeGolyer Collection, SMU.

Key Words: Mining, Mineral Resources, Chihuahua.

Author: Groat, Charles G.

Title: Presidio Bolson, trans-Pecos Texas and adjacent

Mexico: geology of a desert basin aquifer system.

Date: 1972.

Publication: Austin, Texas: Bureau of Economic Geology,

University of Texas at Austin.

Vol: Pages: Report of investigations (University of Texas at

Austin, Bureau of Economic Geology), no. 76; 46pp.

Summary: Publication of master's thesis on water resources in

the Presidio Bolson of Presidio County, Texas, and adjacent Chihuahua, Mexico. Copies available at the Science Library, SMU; also at the Earth Science Library,

University of Colorado, Boulder.

Key Words: Presidio Bolson, Trans-Pecos, Geology, Chihuahua.

Author: Guillen, Ariel.

Title: "Analisis ecologico mediante tecnicas de ordenacion

y multivariadas de dos materiales deserticos de la

cuenca Rio Bravo - Arroyo de la ventana."

Date: 1996.

Publication: Chihuahua: Universidad Autonoma de Chihuahua.

Vol: Pages: Ph. D. dissertation.

Summary: Study of the variety of desert ecological conditions

in the Rio Bravo/Rio Grande basin (specifically the

Arroyo de la ventana). Copy available at the Universidad

Autonoma de Chihuahua Library, Ciudad Chihuahua,

Chihuahua, Mexico.

Key Words: Chihuahua, Rio Bravo basin, ecology.

Author: Heatley, Juan.

Title: Informe general de la exploracion sanitaria del

municipio de Manuel Benavides, Chihuahua.

Date: 1942

Publication: Tesis (medico cirujano y partero)-Universidad

Nacional Autonoma de Mexico, Mexico.

Vol: Pages: 66pp.

Summary: Survey of sanitary conditions in the community of

Manuel Benavides, Chihuahua. Copy available at the Benson Collection LAC-Z Rare Books, University of Texas

Library, Austin.

Key Words: Sanitary Conditions, Manuel Benavides, Chihuahua.

Author: Holguin Saenz, Armando.

Title: Breve Ensayo Sobre La Geografia y Economia del

Estado de Chihuahua.

Date: 1984.

Publication: Chihuahua, Mexico: Ediciones Turistas Editores,

S.A.

Vol: Pages: 677pp.

Summary: Survey of the climate, soils, rainfall, botany,

geology, zoology, avifauna, industry, agriculture,

land ownership, forestry, irrigation, cattle

ranching, and tourism of Chihuahua state. Copy available at El Centro de Informacion del Estado de Chihuahua,

Ciudad Chihuahua, Chihuahua, Mexico.

Key Words: Geology, Botany, Agriculture, Tourism, Cattle

Ranching, Chihuahua.

Author: Immitt, James Peter.

Title: Skarn and epithermal vein mineralization in the

San Carlos Caldera region, northeastern

Chihuahua, Mexico.

Date: 1981.

Publication: Master's Thesis, University of Texas at Austin.

Vol: Pages: 110pp.

Summary: Study of volcanic activity in the San Carlos/Manuel

Benavides area of Chihuahua state. Copy available at the

Geology Library, University of Texas, Austin.

Key Words: Calderas, Mineralization, San Carlos, Chihuahua.

Author: Instituto Nacional de Antropologia e Historia,

Mexico, y Programa Cultural de las Fronteras, SEP.

Title: Catalogo nacional monumentos historicos

inmuebles, Chihuahua.

Date: 1986.

Publication: Mexico: Secretaria de Educacion Publica: Instituto

de Antropologia e Historia: Programa Cultural de

las Fronteras.

Vol: Pages: n/a.

Summary: Survey of historic structures and national

monuments in Chihuahua state. Copy available at the Universidad Autonoma de Ciudad Juarez Library, Ciudad

Juarez, Chihuahua, Mexico.

Key Words: Historic Structures, Chihuahua.

Author: Insituto Nacional de Ecologia

Title: Programa de manejo del Area de Proteccion de

Flora y Fauna del Canon de Santa Elena.

Date: 1997

Publication: Mexico: Instituto Nacional de Ecologia.

Vol: Pages: 134pp.

Summary: Management plan of SEMARNAP for the Canon de

Santa Elena protected area. Includes a brief history and description of the area; strategies for

operations; problems of management. Copy available at the Universidad Autonoma de Chihuahua Library, Ciudad

Chihuahua, Chihuahua, Mexico.

Key Words: Canon de Santa Elena, Flora y Fauna.

Author: Instituto Nacional de Estadistica, Geografia e

Informatica (Mexico), y Gobierno del Estado de

Chihuahua.

Title: Anuario estadistico del Estado de Chihuahua.

Date: 1997.

Publication: Aguascalientes Ags.: INEGI.

Vol: Pages: n/a.

Summary: Statistical survey of Chihuahua state for 1997.

Key Words: Statistics, Chihuahua.

Author: Instituto Nacional de Estadistica, Geografia e

Informatica.

Title: Atlas Ejidal del Estado de Chihuahua: Encuesta

Nacional Agropecuaria Ejidal.

Date: 1988.

Publication: Chihuahua, Chihuahua: INEGI.

Vol: Pages: n/a.

Summary: Periodical of *ejidos* (community lands) in

Chihuahua state (primarily land and cattle

operations, or *agropecuarios*). Copies available at the Universidad Autonoma de Chihuahua Library; also at the

Universidad Autonoma de Ciudad Juarez Library.

Key Words: Ejido, Chihuahua.

Author: Instituto Nacional de Estadistica, Geografia e

Informatica (Mexico).

Title: Chihuahua: resultados definitivos, VII Censo

Agricola-Ganadero.

Date: 1994.

Publication: Aguascalientes: INEGI.

Vol: Pages: n/a.

Summary: Seventh Mexican census of farming and ranching

operations in Chihuahua state.

Key Words: Census, farming, ranching, Chihuahua.

Author: Instituto Nacional de Estadistica, Geografia e

Informatica (Mexico).

Title: Chihuahua: sintesis de resultados, xi censo general

de poblacion y vivienda, 1990.

Date: 1993.

Publication: Aguascalientes Ags. Mexico: INEGI.

Vol: Pages: n/a.

Summary: Data from the eleventh census of population and

housing for Chihuahua state.

Key Words: Census, Population, Housing, Chihuahua.

Author: Instituto Nacional de Estadistica, Geografia e

Informatica.

Title: X Censo General de Poblacion y Vivienda, 1980:

Estado de Chihuahua.

Date: 1980

Publication: Mexico: INEGI.

Vol: Pages: n/a.

Summary: Data from tenth census of population and housing

for Chihuahua state. Copy available at the Universidad

Autonoma de Chihuahua Library.

Key Words: Census, Population, Housing, Chihuahua.

Author: John, Elizabeth A.H.

Title: "Spanish-Indian Relations in the Big Bend Region during

the Eighteenth and Early Nineteenth Centuries."

Date: 1991.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 3.

Summary: Study of diplomacy and warfare along the Rio Bravo in

the Big Bend country from 1700-1821.

Key Words: Big Bend, Chihuahua, Coahuila, Spain, Indians.

Author: Keller, G. Randy, and Steven M. Cather. Eds.

Title: Basins of the Rio Grande rift: structure,

stratigraphy, and tectonic setting.

Date: 1994.

Publication: Boulder, Colorado: Geological Society of America.

Vol: Pages: 304pp.

Summary: Series of scientific articles on the geology, ecology,

and hydrology of the Rio Grande, from its source in southern Colorado to its mouth at the Gulf of Mexico. Includes reprint of article by Edward Collins and Jay Raney on the "tertiary and

quarternary tectonics of the Hueco bolson, Trans-

Pecos Texas and Chihuahua, Mexico." Copies available at the Michener Library, University of Northern Colorado, Greeley; also at the Earth Science Library, University of

Colorado, Boulder.

Key Words: Tectonics, Geology, Hueco Bolson, Trans-Pecos

Texas, Chihuahua.

Author: Kentenbrink, K.C., and West Texas Geological

Society, eds.

Title: Geology and petroleum potential of Chihuahua,

Mexico.

Date: 1984.

Publication: Midland, Texas: West Texas Geological Society.

Vol: Pages: West Texas Geological Society. Field trip

guidebook: 1984. Publication (West Texas Geological Society); 1984; no. 84-80; 218pp.

Summary: Papers of participants in a three-day field trip to

Chihuahua state to study energy sources. Copy available

at the Science Library, DeGolyer Collection, SMU.

Key Words: Geology, Petroleum, Chihuahua.

Author: Knobloch, Irving William, and Donovan Stewart

Correll.

Title: Ferns and fern allies of Chihuahua, Mexico.

Date: 1962.

Publication: Renner, Texas: Texas Research Foundation.

Vol: Pages: Contributions from Texas Research Foundation,

vol. 3; 198pp.

Summary: Study of ferns in Chihuahua state. Copies available at

the DeGolyer Library, SMU; also at the Science Library,

University of Colorado, Boulder.

Key Words: Ferns, Chihuahua.

Author: Leopold, A. Starker.

Title: Wildlife of Mexico: the game birds and mammals.

Date: 1959.

Publication: Berkeley, California: University of California Press.

Vol: Pages: 568pp.

Summary: Definitive study of wildlife in Mexico. Copies available at

the University of Texas Library, Austin; also at the

DeGolyer Library, SMU.

Key Words: Wildlife, Mexico.

Author: LeSueur, Hardeman David.

Title: The ecology of the vegetation of Chihuahua,

Mexico, north of parallel twenty-eight.

Date: 1945.

Publication: Austin, Texas: University of Texas Press.

Vol: Pages: Revised Ph.D. dissertation, University of Texas,

1938; The University of Texas publication, no.

4521; 92pp.

Summary: List of plants found in Chihuahua state. Copies available

at the Botanical Research Institute of Texas, Fort Worth; also at the Benson Latin American Collection, University

of Texas Library, Austin.

Key Words: Ecology, Vegetation, Chihuahua.

Author: Lister, Florence Cline, and Robert Hill Lister.

Title: Chihuahua: storehouse of storms.

Date: 1966.

Publication: Albuquerque: University of New Mexico Press.

Vol: Pages: 360pp.

Summary: Popular study of environmental and historical

distinctiveness of Chihuahua state (also published

in Spanish as Chihuahua: almacen de

tempestades). Copy available at the DeGolyer Library,

SMU.

Key Words: Environment, History, Chihuahua.

Author: Madrid, Enrique R.

Title: "Native American and Mestizo Farming at La Junta de los

Rios."

Date: January 1996.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 8.

Summary: Study of agricultural practices among Indian and

Mexicano villages near Ojinaga, Mexico, and Presidio,

Texas.

Key Words: Native American, Mestizo, La Junta de los Rios, farming.

Author: Mallouf, Robert J.

Title: Las Haciendas: a cairn-burial assemblage from

northeastern Chihuahua, Mexico.

Date: 1987.

Publication: Austin: Texas Historical Commission.

Vol: Pages: Office of the State Archeologist Report no. 35;

108pp.

Summary: Report of precontact Indian burial customs and

rites in northeastern Chihuahua state. Copy available at the Center for American History, University of Texas

Library, Austin.

Key Words: Cairn-burial, Chihuahua.

Author: Mallouf, Robert J.

Title: "Comments on the Prehistory of Far Northeastern

Chihuahua, the La Junta District, and the Cielo Complex."

Date: 1999.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 11.

Summary: Summary of archaeological research conducted along the

Rio Bravo east of Ojinaga, Chihuahua.

Key Words: La Junta District, Cielo Complex, archaeology.

Author: Mauldin, Randall Allen.

Title: Foraminiferal biostratigraphy, paleoncology, and

correlation of the Del Rio Clay (Cenomanian), from Bend National Park, Brewster County, Texas, to the

Cerro de Muleros area, Dona Ana County, New

Mexico.

Date: 1985.

Publication: Master's Thesis, University of Texas at El Paso.

Vol: Pages: University of Texas at El Paso Master's Thesis: no.

2227; 88pp.

Summary: Study of fossils, geology, and paleoecology of the

Rio Grande basin from Big Bend National Park

upstream to southern New Mexico. Copy available at the

University of Texas at El Paso Library.

Key Words: Biostratigraphy, Del Rio Clay, Cerro de Muleros,

Texas, New Mexico.

Author: McClure, Charles R.; preface by W.H. Timmons.

Title: Guide to the microfilm collection of the Periodico

Oficial de Chihuahua.

Date: 1974 (?)

Publication: El Paso, Texas: University of Texas at El Paso,

Center for Inter-American Studies.

Vol: Pages: 37pp.

Summary: Index and listing of legal documents in the

Periodico Oficial de Chihuahua (official journal of Chihuahua state). Copy available at the Zimmerman Library, University of New Mexico, Albuquerque.

Key Words: Periodico Oficial de Chihuahua.

Author: Mearns, Edgar Alexander, ed.

Title: Mammals of the Mexican boundary of the United

States: A descriptive catalogue of the species of mammals occurring in that region; with a general summary of the natural history, and a list of trees.

Date: 1907

Publication: Washington, DC: U.S. Government Printing Office. Vol: Pages: Smithsonian institution. United States national

museum. Bulletin 56.

Summary: Survey of mammals, trees, and the natural history

of the Rio Grande border region. Copies available at the

Government Publications Section, Norlin Library,

University of Colorado, Boulder; also at the Documents Section, Morgan Library, Colorado State University, Fort

Collins.

Key Words: Mexican boundary, Mammals, Trees, Natural

History.

Author: Morafka, David Joseph.

Title: A biogeographical analysis of the Chihuahuan

desert through its herpetofauna.

Date: 1974.

Publication: Master's Thesis, University of Southern California.

Vol: Pages: Microfilm, Ann Arbor, Michigan, University

Microfilms 1974. 1 reel; 35mm; 516pp.

Summary: Study of desert fauna in Chihuahua state, with an

emphasis on snakes. Copy available at the Benson Latin American Collection, University of Texas Library, Austin.

Key Words: Herpetofauna, Chihuahua.

Author: Muehlberger, William R.

Title: Structure and Stratigraphy of Trans-Pecos Texas: El

Paso to Guadalupe Mountains and Big Bend, July

20-29, 1989.

Date: 1989.

Publication: Washington, DC: American Geophysical Union. Vol: Pages: International Geological Congresss (28<sup>th</sup>: 1989;

Washington, D.C.). Field trip guidebook; T317.

Summary: Report of tour of west Texas and northeastern

Chihuahua state to study the geology of the region.

Copy available at the Centennial Science and Engineering

Library, University of New Mexico.

Key Words: Stratigraphy, Geology, Trans-Pecos Texas, El Paso,

Guadalupe Mountains, Big Bend, Chihuahua.

Author: Murie, Olaus Johan.

Title: The Elk of North America.

Date: 1951

Publication: Harrisburg, Pennsylvania: Stackpole Company.

Vol: Pages: 376pp.

Summary: Definitive study of elk in North America, including

survey of northern Mexico. Copy available at the Science

Library, University of Colorado, Boulder.

Key Words: Elk, North America.

Author: Ohl, Carolyn.

Title: "Jumanos and Tarahumaras: A Common Identity?"

Date: January 1993.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 5.

Summary: Comparative study of early and contemporary native

cultures in northeastern and central Chihuahua state.

Key Words: Jumanos, Tarahumaras.

Author: Olson, Rupert Earl.

Title: Biogeographic and ecologic analysis of the

herpetofauna in the northern Chihuahuan Desert.

Date: 1978.

Publication: Master's Thesis, University of Colorado, Boulder.

Vol: Pages: 126pp.

Summary: Study of the geographical distribution of reptiles,

amphibians, and of the ecology of the Chihuahuan

Desert. Copy available at the Science Library, University

of Colorado, Boulder.

Key Words: Herpetofauna, Chihuahua.

Author: Ordonez Hernandez, Alejandro.

Title: El Mineral de San Carlos en Manuel Benavides,

Chihuahua.

Date: 1949.

Publication: Tesis (medico cirujano y partero) — Universidad

Nacional Autonoma de Mexico, Mexico.

Vol: Pages: 31pp.

Summary: Study of health issues in the community of Manuel

Benavides, especially the mining district. Copy available at the Benson Collection LAC-Z Rare Books, University of

Texas Library, Austin.

Key Words: San Carlos, Manuel Benavides, Chihuahua.

Author: Ornelas, Julio, and Ignacio Chavez Franco.

Title: Chihuahua (Mexico): compendio de apuntes acerca

de las riquezas naturales, industria, comercio,

transportes, etc., del estado de Chihuahua, Mexico.

Date: 1925

Publication: Chihuahau: Imprenta del gobierno.

Vol: Pages: 63pp.

Summary: Data summary of the wealth of Chihuahua state,

including natural resources, industry, commerce, and transportation. Copy available at the DeGolyer

Library, SMU.

Key Words: Natural Resources, Industry, Commerce,

Transportation, Chihuahua.

Author: Pospisil, Jo Ann.

Title: "Chihuahuan Desert Candelilla.: Folk Gathering of a

Regional Resource."

Date: January 1994.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 6.

Summary: Cultural study of the practice of gathering candelilla

plants in the Big Bend country.

Key Words: Candelilla, Chihuahuan Desert.

Author: Pospisil, Jo Ann.

Title: "Women and Wax: Female Participation in the Candelilla

Wax Industry."

Date: January 1996.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 8.

Summary: Study of gender roles in the production of candelila wax

in the Big Bend country.

Key Words: Candelilla, Women.

Author: Ramirez Aguirre, Alfonso.

Title: "Promueven el ecotourismo en reserva Santa

Elena."

Date: November 6, 1997
Publication: Diario de Chihuahua.

Vol: Pages: n/a.

Summary: Newspaper story describing the little-known

natural and cultural features of the recently established protected area of El Canon de Santa Elena, and efforts to restore historic structures like El Presidio de San Carlos y la Hacienda de los

El Presidio de San Carlos y la Hacienda de los Orientales. Copy available on the Internet at http://200./34.156.10/universidad/Wreturn.pl

Key Words: Canon de Santa Elena, Ecotourism, El Presidio de

San Carlos, La Hacienda de los Orientales.

Author: Rosales Padron, Pedro.

Title: Estudio sanitario y determinacion de la

susceptibilidad a la difteria en Manuel Benavides,

Chihuahua.

Date: 1949

Publication: Tesis (medico cirujano y partero) — Universidad

Nacional Autonoma de Mexico, Mexico.

Vol: Pages: 45pp.

Summary: Study of sanitation conditions in the community of

Manuel Benavides, Chihuahua, with emphasis on

an outbreak of diptheria. Copy available at the Benson Collection LAC-Z Rare Books, University of Texas Library,

Austin.

Key Words: Sanitation, Diptheria, Manuel Benavides,

Chihuahua.

Author: Sayles, Edwin Booth.

Title: An archaeological survey of Chihuahua, Mexico.

Date: 1936.

Publication: Globe, Arizona: Private printing for the Medallion,

Gila Pueblo.

Vol: Pages: Medallion papers: no. XXII; 119pp.

Summary: Study of archaeological sites in Chihuahua state. Copies

available at the DeGolyer Library, SMU; also at the

University of Denver Library.

Key Words: Archaeology, Chihuahua.

Author: Secretaria de Medio Ambiente, Recursos Naturales

y Pesca (SEMARNAP).

Title: "Canon de Santa Elena" (web page)

Date: 1999.

Publication: http://www.ine.gob.mx/ucamp/data/consultaFicha.html?anp = 95

Vol: Pages: n/a.

Summary: Official SEMARNAP web site for the Canon de Santa

Elena protected area. Includes statistical data on flora and fauna, historic sites, communities within the protected area, and legislation affecting the

area.

Key Words: Canon de Santa Elena.

Author: Schmidt, Jr., Robert H.

Title: A geographical survey of Chihuahua.

Date: 1973.

Publication: El Paso, Texas: Texas Western Press.

Vol: Pages: Southwestern studies (El Paso, Texas); monograph

no. 37; 63pp.

Summary: Description of landscape of Chihuahua state. Copies

available at the Fondren Library, SMU; also at the Center for American History and the Benson Latin American

Collection, and the Geology Library, of the University of

Texas, Austin.

Key Words: Geography, Chihuahua.

Author: Simonian, Lane.

Title: Defending the land of the jaguar: a history of

conservation in Mexico.

Date: 1995. Vol: Pages: 326pp.

Summary: First book-length study of the conservation ethic in

Mexico, from precontact societies to the

environmental movement of the 1970s and 1980s. Includes discussion of natural resource agency development, and border ecology studies. Copies

available at the University of Texas Library, Austin; also

at the DeGolyer Library, SMU.

Key Words: Conservation, Mexico.

Author: Sociedad Chihuahuense de Estudios Historicos.

Title: Boletin-Sociedad Chihuahuense de Estudios

Historicos.

Date: May 1938-

Publication: Chihuahua, Mexico.

Vol: Pages: n/a.

Summary: Scholarly journal of the social history of

Chihuahua state. Copy available at the Norlin Library,

University of Colorado, Boulder.

Key Words: Chihuahua, Social History.

Author: Tanner, Susan L.

Title: "From Castolon to Santa Elena: The People Behind the

Ruins."

Date: January 1993.

Publication: Journal of Big Bend Studies.

Vol: Pages: Volume 5.

Summary: Study of Mexicano cultural landscape in the

Castolon/Santa Elena area.

Key Words: Castolon, Santa Elena.

Author: Tinker, Ben; foreword by A. Starker Leopold.

Title: Mexican wilderness and wildlife.

Date: 1978.

Publication: Austin: University of Texas Press.

Vol: Pages: 131pp.

Summary: Study of the natural history of Mexico, with

emphasis on game animals and game birds. Copies available at the University of Texas Library; also at the

Morgan Library, Colorado State University.

Key Words: Mexico, Wildlife, Wilderness.

Author: Trevino Fernandez, Jose C.

Title: "Number and distribution of pronghorn antelope in

Chihuahua, Mexico."

Date: 1978.

Publication: Thesis (M.S.)—New Mexico State University.

Vol: Pages: 58pp.

Summary: Study of antelope in Chihuahua. Copy available at the

Morgan Library, Colorado State University.

Key Words: Pronghorn Antelope, Chihuahua.

Author: Tyler, Ron, Douglas E. Barnett, Roy R. Barkley,

Penolope C. Anderson, and Mark F. Odnitz, eds.

Title: The New Handbook of Texas (online).

Date: 1999.

Publication: <a href="http://www.tsha.utexas.edu/cgi-">http://www.tsha.utexas.edu/cgi-</a>

bin/web tech doc?dataset tsha.dst&db handbook&doc i

d =

Vol: Pages: Six Volumes; 7,000pp.

Summary: Entries for Maria Sada, Santa Elena Canyon, and

Voice of the Mexican Border.

Key Words: Maria Sada, Santa Elena Canyon, Voice of the

Mexican Border.

Author: Union de Madereros de Chihuahua

Title: Boletin forestal/organo de la Union de Madereros

de Chihuahua.

Date: 1948-1951.

Publication: Chihuahua, Chihuahua: Union de Madereros de

Chihuahua.

Vol: Pages: No. 1-35 (oct. 1948-dic. 1951).

Summary: Trade journal of forestry in Chihuahua produced

by the Union of forest workers of Chihuahua. Copy available at the Benson Latin American Collection,

University of Texas, Austin.

Key Words: Forestry, Chihuahua.

Author: U.S. Geological Survey, U.S. Department of the

Interior, and John-Mark Staude.

Title: Map of metallic mining districts and mineral

deposit types in Chihuahua, Mexico.

Date: 1993.

Publication: Reston, VA: The Survey; [Denver, Colorado: Books

and Open-File Reports Section, distributor].

Vol: Pages: U.S. Geological Survey open-file report; 93-718. Map with text, location map, and table of mining Summary:

resource areas of Chihuahua state. Copy available at the

Science Government Information Section, Science

Library, SMU.

Key Words: Mining, Chihuahua.

Author: United States. Consulate (Chihuahua, Mexico). Title:

Despatches from United States consuls in

Chihuahua, 1830-1906.

Date: 1964.

Publication: Washington, DC: The National Archives, National

Archives and Records Service, General Services

Administration.

Vol: Pages: National Archives microfilm publications;

microcopy no. 289.

Copies of official correspondence Summary:

between the American consul's office and the U.S.

State Department regarding matters in Chihuahua. Copy

available at the Fondren Library, SMU.

Key Words: U.S. State Department, Chihuahua.

Author: Valdez-Reyna, Jesus.

Title: Grasses of Chihuahua, Mexico.

Date: 1977.

Publication: Thesis (M.S.)—University of Wyoming.

Vol: Pages: 256pp.

Summary: Study of grasses in Chihuahua state. Copy available at

the Life Science Library, University of Texas, Austin.

Key Words: Grasses, Chihuahua.

Author: Velazquez Pardo, Jose Antonio.

Title: Informe sobre la exploracion sanitaria del

municipio de Manuel Benavides, Chihuahua;

afecciones quirurgicas del pancreas.

1952. Date:

Publication: Tesis (medico cirujano y partero) — Universidad

Nacional Autonoma de Mexico, Mexico.

Vol: Pages: 48pp.

Summary: Medical survey of sanitary conditions in Manuel Benavides, Chihuahua, with emphasis on surgical procedures for pancreatic diseases. Copy available at the Benson Collection LAC-Z Rare Books,, University of

Texas Library, Austin.

Key Words: Sanitary Conditions, Pancreatic Disease, Manuel

Benavides, Chihuahua.

Author: Wauer, Roland H.

Title: Birds of Big Bend National Park and Vicinity.

Date: 1973.

Publication; Austin: University of Texas Press.

Vol: Pages: 223pp.

Summary: Study of birds along the Rio Grande in Big Bend

National Park and northern Mexico. Copy available at the

Science Library, SMU.

Key Words: Birds, Big Bend National Park.

Author: Wauer, Roland H.

Title: For All seasons: A Big Bend Journal.

Date: 1997

Publication: Austin: University of Texas Press.

Vol: Pages: 208pp.

Summary: Personal reminiscences of travels through Big Bend

National Park and northern Mexico. Copy available at the

Science Library, SMU.

Key Words: Big Bend.

Author: Wauer, Roland H.

Title: Naturalist's Big Bend: an introduction to the trees

and shrubs, wildflowers, cacti, mammals, birds,

reptiles and amphibians, fish and insects.

Date: 1980.

Publication: College Station: Texas A&M University Press.

Vol: Pages: 149pp.

Summary: Study of flora and fauna of the Big Bend region by

former chief naturalist for the National Park Service (also former chief naturalist for Big Bend National Park). Copy available at the Science Library,

SMU.

Key Words: Big Bend National Park, Flora and Fauna.

Author: Willeford, Glenn P.

Title: "General Albino Aranda: Villista Leader on the

Texas Border During the Mexican Revolution."

Date: 1998.

Publication: The Journal of Big Bend Studies.

Vol: Pages: Volume 10: 149-61.

Summary: Historical study of military operations against the

United States in 1916 staged from San Carlos, Chihuahua, by a unit of the forces under Francisco "Pancho" Villa, and led by a native of the San Carlos area (General Albino Aranda Maldonado).

Key Words: Albino Aranda, Mexican Revolution, Texas Border.

Author: Wolleben, James Anthony.

Title: Biostratigraphy of the Ojinaga and San Carlos

formations of west Texas and northeastern

Chihuahua.

Date: 1996.

Publication: Thesis (Ph.D.)—University of Texas.

Vol: Pages: 63pp.

Summary: Study of the paleontology of Presidio County,

Texas, and of Chihuahua state; also the

stratigraphic geology of the area. Copy available at the

Geology Library, University of Texas, Austin.

Key Words: Biostratigraphy, Ojinaga, San Carlos, West Texas,

Chihuahua.